



# State of New Jersey

Christine Todd Whitman  
Governor

Department of Environmental Protection

Robert C. Shinn, Jr.  
Commissioner

Mr. Norman D. Kennel  
Environmental Project Manager  
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APR 01 1999

Dear Mr. Kennel:

Re: Ventron/Velsicol Superfund Site  
Wood-Ridge and Carlstadt Boroughs, Bergen County

The New Jersey Department of Environmental Protection (Department) and EPA have reviewed the Remedial Investigation Report dated December 14, 1998 and have the following comments:

1. The Department and EPA have determined that the site should be divided into operable units: Operable Unit 1 will consist of the developed and undeveloped filled area (i.e., the uplands areas) and ground water; Operable Unit 2 will consist of the marsh (i.e., wetlands) area and all waterways (including ditches). Additional investigation and subsequent remediation of Operable Unit 2 will be deferred at this time.
2. The electronic data submittal did not pass the EDSA file check. Modifications may have to be made to the disks if the Department's programmer cannot rectify the problems.
3. An investigation of the "containment" wall is required to determine its existence and condition. Please propose what steps will be taken to make these determinations, e.g., reviews of building permits that may be on file with the municipality, subsurface investigations, etc.
4. The application of the municipal landfill presumptive remedy for the undeveloped filled area is not appropriate. Therefore, a quantitative human health and ecological risk assessments for current site conditions as well as a feasibility study must be conducted for the developed area, undeveloped fill area, and ground water upon completion of this remedial investigation.
5. Three additional wells must be installed to fully evaluate the quality of the ground water. One should be installed between SS-04 and SS-05; one near the railroad tracks in the vicinity of SS-06; and one between MW-8 and MW-12.



6. During the RI surface water and seep samples were collected along Berry's Creek and Henkel Ditch which abut the eastern and southern border of the site. As required in the work plan, inorganic samples were collected of both the dissolved and total recoverable fractions. The report opts to disregard the total recoverable inorganic results due to concerns about entrainment of sediment particles during sample collection. The Department's position on this issue is contained on page 8 of the Department's "Guidance for Sediment Quality Evaluation" dated November 1998. "For inorganic contaminants, it is recommended by the USEPA Region II Biological Technical Assistance Group (BTAG) and the SRP that both dissolved and total recoverable metals be measured. Most aquatic water quality criteria are based on the dissolved (filtered) form of the metal; however, the total recoverable (unfiltered) inorganic value is more indicative of total contaminant exposure and should be used for risk-management decision-making. Additionally, USEPA Office of Water recommends that Superfund ecological risk assessments consider inorganics on a total recoverable basis to conservatively avoid underestimation of bioavailable metals (USEPA, 1993). Together, the two sets of measurements are used to judge regulatory compliance as well as potential adverse ecological impact."

Consequently, the report must be revised to reflect the Department's and EPA's concerns noted above. A discussion of both sets (total and dissolved) of inorganic data must be included throughout the report where appropriate.

- ② 7. There is uncertainty as to whether the elevated concentrations of metals in the soils, subsoils, and wetland sediments would be substantially immobilized by geochemical conditions at the site. The discussion of the factors influencing metal availability in the text is misleading throughout Section 5.0. Investigation of the bioavailability of these metals is best addressed through chemical residue tissue analysis and bioassays including toxicity testing and bioaccumulation. The concentrations identified in the wetland and creek sediments are well above the thresholds (toxicity, uptake) reported in the literature. A general discussion of biogeochemical cycling of mercury is useful, but it should not be used to infer that the mercury at concentrations of up to 11,100 ppm in sediment are sequestered and unavailable to biota.
- ③ 8. Conclusions are proposed in the RI regarding the attribution of surface water and sediment contaminants. The difficulty of quantifying site contributions, the rapid dilution and transport of contributions from the site in surface water, the tendency of tidal flow to obscure patterns of contaminants in sediment, and the existence of other potential sources are all proposed as support for not considering contaminants to be site-related (page 5-4). However, these factors should not be considered to provide rationale for these conclusions. Site-related contamination has migrated, via flooding, runoff, and erosion, to adjacent surface water bodies; therefore, surface water and sediment in these water bodies (i.e., the unnamed ditch, the channel connecting the Diamond Shamrock/Henkel Property Ditches, Nevertouch Creek, and Berry's Creek) should be evaluated as media of concern.

9. Wetland sediments were inappropriately screened and evaluated as soils. These 'soil' samples, actually sediments, should be screened against the Long and MacDonald values (Long, E.R., D.D. MacDonald, S.L. Smith, and F.D. Calder. 95. *Incidence of adverse biological effects within ranges of chemical concentrations in marine and estuarine sediments*. Environmental Management v.19, n.1, pp.81-97.). Sediment samples collected from freshwater habitats (e.g., from upstream of the tide gate) should be screened against the Persaud values (D. Persaud, et al. August 93. "Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario." Ontario Ministry of Environment and Energy).

10. When soils are to be screened for ecological SoPCs, contaminant levels should be evaluated against ecological values. The U.S. DOE (Oak Ridge National Laboratory) values for plant and wildlife receptors may be appropriate for a screening-level ecological risk assessment at this site and should be considered.

11. Screening of metals in surface water, leachate/seep, and ground water which discharges to surface water should be compared to New Jersey chronic saltwater and freshwater Surface Water Standards (SWS) or to EPA chronic marine and freshwater Ambient Water Quality Criteria (AWQC). This is of ecological concern because the leachate/seeps and shallow site ground water both discharge directly to surface water associated with the site. Also, comparisons to surface water standards and criteria should be based on both dissolved and total metals for use in ecological risk assessment. Additional SoPCs may be selected in the RI based on these revisions.

12. The report has inconsistent statements regarding surface water hydroregime of the on-site wetlands. It is noted that "the wetland surface seems to be completely inundated only during the spring tides and storm events (page 3-22). Alternatively, it is noted that "portions of the marsh are flooded twice a day, during high tide" and that "a larger portion of this area is flooded during higher tide events, such as spring tides and storms" (page 3-9). Please clarify.

13. A figure delineating the upland and wetland portions of the site, and the portions of the wetlands that are flooded regularly (i.e., daily) and irregularly (i.e., spring tides and storms) should be provided. This figure is important for both identifying habitat-types present on the site (for selection of exposure pathways and receptors in the ecological risk assessment) and understanding the contaminant migration and transport mechanisms.

14. The dismissal of PAHs based on the on-site, adjacent off-site, and not adjacent off-site averages presented in Table 4-3 (incorrectly cited as Table 4-4 in the text) and discussed in the text on page 5-34 does not appear to be appropriately justified by the data. Also, while PAHs and PCBs do indeed sorb to particles as stated in the text, the potential for these compounds to be transported with the particles into surface waters and sediments through erosion, runoff, and flooding should not be dismissed. The discussion in Section 5.4 should be revised accordingly and mechanisms of

downstream transport and exposure of organisms to PAHs and PCBs through ingestion should be included.

15. Collection of the top six inches of sediment from surface water systems and wetland habitats should be evaluated. For upland soils or terrestrial habitats, the top 12 inches should be evaluated. These are considered to be the depths at which the majority of exposure to ecological receptors in these habitats would occur. While creek and ditch sediments were collected from the appropriate depths, samples from the top two feet rather than six inches were collected in the wetlands because the wetland sediments were inappropriately screened as soils. Nevertheless, due to the potential at this site for contaminant migration to media of ecological concern, contamination at depth should also be delineated as part of the RI. Collection of sediment cores is recommended at the site to define the vertical extent of mercury contamination in the creek, ditches, and wetlands.

16. Section 1.1, Page 1-3, First paragraph – The additional data collection recommendations are presented in Section 8.3, not Section 8.4.

17. Section 1.1, Page 1-3 - The document states that “previous investigations at the Site, other than the NJDEP studies in 1990-91, were used to provide general background knowledge of Site conditions but were not incorporated into the data set used to meet the remedial investigation objectives.” If the historical data are not appropriate for quantitative use in the RI (e.g., QA/QC issues), then the data should still be discussed and justification for not using them provided. The contaminant concentrations presented in this RI appear to be significantly lower than those of historical sampling events. While this may be an artifact of the quality of the previous data, it may also indicate that the site contaminants, especially the mercury, are distributed in such a heterogeneous manner that further investigation is required.

18. Section 1.3, Page 1-6 – The brief site history provided here is inadequate for the purpose of a remedial investigation report. The narrative must be expanded to include a discussion of the previous operations, site demolition, construction activities and environmental problems of the site. Even though this material is contained in the Background Investigation Technical Memorandum, the report needs to summarize the information in a useful fashion here.

19. Section 1.4, Page 1-7 – The Draft 1991 Sediment Quality Evaluation guidance document referenced here, was updated in November 1998. This document should be referenced and followed throughout the report.

20. Section 1.4, Page 1-7 - Several PAH compounds were eliminated as SoPCs solely on the basis that it was only found at one location at levels exceeding the Non-residential Soil Cleanup Criteria. This is not consistent with the Technical Requirements for Site Remediation and must be removed from the report. It may, however, be possible to eliminate these compounds as SoPCs based upon averaging provisions contained in 7:26E-4.8.

21. Section 1.4, Page 1-8, Tables 1-1 and 1-2 – Ground water must also be screened against freshwater aquatic surface water criteria due to the potential for ground water to discharge to surface water (Berry's Creek and associated wetlands). Surface soil contaminant levels should also be screened against ecological criteria. Screening against DOE (Oak Ridge National Laboratory) values for plant and wildlife receptors is recommended.

22. Section 1.4, Page 1-9 – The RI states that the “number and magnitude of exceedances were the primary factors for selecting SoPCs.” For the ecological risk assessment, SoPCs should be selected based solely on whether the contaminant exceeds the screening value. Other factors such as “the relative distribution and variability of the substance...” should not be considered in a screening-level selection of SoPCs. For further information in the selection of contaminants of concern in the ecological risk assessment, please refer to the OSWER guidance document “Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments Interim Final” (U.S. Environmental Protection Agency, Environmental Response Team, Edison, NJ, June 5, 1997).

23. Section 1.4, Page 1-10 – Fluoranthene exceeded the IGWSCC at sample location TP-18, however the compound is not included in the list of SoPCs for subsurface soils or mentioned as one of the compounds eliminated from the list of SoPCs. Please clarify.

24. Section 1.4, Page 1-11 – Seep sample results should also be compared to freshwater aquatic surface water standards. As per the Department's 1998 sediment guidance document and EPA Region II BTAG policy, total and filtered (dissolved) surface water and surface water seep results shall also be compared to the above standards/criteria.

25. Section 1.4, Page 1-11 – Fluorene was excluded as a sediment SoPC because the concentration exceeded the screening concentration at only one on-site basin sample location. This is not acceptable for risk assessment purposes.

26. Section 2.2.2, Page 2-10 – Please submit the color photos of the open test pits.

27. Section 2.5.2, Page 2-20 – Two sediment sample locations were selected from the on-site retention basin, one on the western edge, and one on the eastern edge. Depending on the bottom configuration, worst case settling of historic sediment contamination may be more centrally located. This issue should be addressed and/or samples taken in the deepest region of the basin.

28. Section 3.5.1, Page 3-7 – The field staff observed that the “bulk of the water flows through a channel along the eastern edge of the marsh to Nevertouch Creek, before converging with Berry's Creek.” Yet, no sediment or surface water samples were collected in this channel or Nevertouch Creek. Sampling should be conducted in these areas.

29. Section 3.5.2, Page 3-9 – The reference to “Section 3.5.2” appears to be misidentified.

30. Section 3.5.3, Page 3-9 – Actions at CERCLA sites are considered “critical actions” thus, a 500-year floodplain delineation needs to be completed for the site in order to comply with the requirements of Executive Order 11988 (Floodplain Management).

31. Section 3.6.2.1, Page 3-12 – The document states that the “lack of significant changes in groundwater elevation during the tidal study indicates that the groundwater flow direction at the Site is not influenced by the tides in Berry’s Creek.” The document does not provide discussion that the monitoring wells used in the tidal study were designed as water table monitor wells. The screens were set to cross the water table with some of the screened interval, at times, located in the capillary or unsaturated portion of the aquifer. Unsaturated/capillary uptake of tidal front may negate some of the influence by the time it reaches the target wells (i.e., the tidal reach into the site is not great). In addition, the diversity of the fill in which these water table wells are located could also affect the relative response and effect of the tidal reach. Please revise this section to include this information.

32. Pressure induced tidal effects are more evident in monitor wells that are screened in confined aquifer environments and conditions. It should not be implied at this point in the investigation that tidal influences are not present, and water level fluctuations and ground water flow direction do not change at the site during all tidal events since these statements are inclusive and misleading.

33. Section 3.6.3, Page 3-15 – Please delete the sentence “Based on the proximity of the Site to a tidally influenced waterway, and the heavy industrial activities in the surrounding area, potable use of groundwater from the shallow aquifer beneath the site is unlikely.”

34. Section 3.7.2, Page 3-19 – This section discusses, “Based on observations made during the field reconnaissance, however, endangered, threatened, rare, and uncommon species are not likely to be present on the site.” This statement was based on localized observations occurring during one season. Migratory wildlife frequents the creeks and marshland areas in and around the site. Please modify the statement in the report.

35. Section 3.7.3, Page 3-19 and Figure 1-2 – Discussion regarding the potential for the site to expose wildlife to contamination should be revised. The wetlands on-site consist of approximately 12 acres contiguous with broad off-site marshes of the Hackensack Meadowlands and the surface water system of Berry’s Creek and the Hackensack River. This system is known for its regional ecological importance, due in part to its presence in such a developed area. The discussion in the report of wildlife usage of the site is overly narrow, and should be appropriately broadened

when receptors are being selected for the ERA. For example, the presence of fish and shellfish should be noted and included in Section 3.7.2.

36. Page 3-21 – The marsh wren (*Cistothorus palustris*) and the red-winged blackbird (*Agelaius phoeniceus*) are likely present and would possess territories well within the on-site wetlands. In addition, the wren, etc., would feed predominantly on insects, many of which would be aquatic insects which developed within the contaminated marsh system. Bioaccumulated contaminants may therefore be transferred to these receptors. The text should be modified to note that more than robins may be avian species at risk from site contamination.
37. Page 3-22, Section 3.7.4 – An informal, qualitative wetland functional assessment by Dr. Joseph Shisler resulted in a score of 2.2 (range 0-10) for wildlife habitat and 4.0 for water quality functions (Table 3-7). The results of this assessment were used as support for the conclusion in the RI that the site has little wildlife value and, therefore, little potential for wildlife exposure to contaminants. However, the methods used for this assessment were inappropriate. The Indicator Value Assessment (IVA) results of the Draft Environmental Impact Statement for the Hackensack Meadowlands Special Area Management Plan should be used rather than the qualitative assessment. The IVA is based upon a region-wide effort conducted by EPA, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, NJDEP, and Hackensack Meadowlands Development Commission. If an additional assessment is desirable, it should follow the protocol developed by the interagency effort specifically for the evaluation of wetlands within the Hackensack Meadowlands.
38. Section 3.7.4.1, Page 3-23 – The text should be modified to better explain the wetland assessment results and conclusions. For example, the wildlife habitat score of 71 should be better explained. Is 71 a score within an assessment range of 0-100 with 100 being the highest score? If so, why does this result in a "limited habitat" score?
39. Section 4-1 – Throughout this section, elements and compounds are discussed without reference to the Soil Cleanup Criteria. Examples of this are the mercury discussion on pages 4-2 to 4-4 and the metals discussion on pages 4-4 and 4-5. This section and other sections of the report where this occurs should be revised accordingly.
40. Section 4.1.2.1, Page 4-8 – The reference to the high range of mercury (1550 ppm) found in the subsurface soils in the Phase I investigation appears to be in error since it is exactly the same as the concentration found during the Department's 1990 study. The reference should be checked and corrected if necessary.
41. Section 4.1.3.3, Page 4-12 – The report must discuss the actual concentrations of the various PAH compounds that were found in the off-site surface soil samples.
42. Section 4.2, Page 4-13 – The document discusses levels of contamination in the ground water with respect to the instrument detection limits (IDL). The ground water

quality criteria, as set forth in the Ground Water Quality Standards for a Class IIA aquifer must be used to determine regulatory compliance. In addition to the IDL discussion and evaluation the document should discuss the various contaminants documented to exist in the ground water at the site with respect to their appropriate ground water quality criteria.

43. Section 4.2.1, Page 4-16 – The ground water analytical data generated for MW-2 documented a dilution rate, which resulted in high detection limits for several semi-volatile organic compounds (SVOCs). This resulted in several of the SVOCs to exceed their Ground Water Quality Standards. A discussion regarding the SVOC contamination observed in MW-2, the reason for the dilution and the elevated instrument detection limits should be included. In addition, a discussion of the SVOCs as possible contaminants of concern for ground water should be included here and in Sections 1.4 and 5.4.1.
44. Section 4.3.1, Page 4-18 – The report states mercury values were “estimated” using the total suspended solids content of the sample. The report must state the methods which were employed to make this estimation and what value this estimate has when “real data” giving the total and dissolved concentration for each contaminant is available.
45. Section 4.4, Page 4-19 – The limited number of surface water metals remaining as SoPCs is likely due to comparisons of dissolved results to freshwater aquatic surface water criteria/standards. Total results should also be compared to the criteria/standards.
46. Section 5.1, Page 5-3 - The bulleted list of potential pathways presented should include both soil contamination in the developed areas and soil contamination in the undeveloped fill area as potential sources of surface water and sediment contamination. Dismissing erosion of surface soil in the undeveloped filled areas as a migration pathway because the area is highly vegetated is inappropriate (pages 5-3 and 5-5). The undeveloped filled area is impacted by mercury (to 548 ppm in surface soil) from the process area. The transport of contaminants out of the undeveloped filled area to Berry's Creek and the marsh from precipitation and/or flooding events is expected. It is recommended that this pathway be added to the RI.
47. Section 5.1.1, Page 5-6 - Please note that although the developed area is almost completely paved, the condition of the pavement in some areas is poor and the opportunity for infiltration of surface water into contaminated soil exists.
48. Section 5.1.1, Page 5-6 – In the Ground Water Hydrology Section, it should be mentioned that the bedrock aquifer is used as a water source in the immediate area.
49. Section 5.1.1, Page 5-7 – The document states, “Several metals form insoluble complexes with sulfides - notably for this Site, cadmium, copper, lead, mercury,



nickel, silver, zinc, and to a lesser extent, arsenic – reducing their mobility in groundwater.” Please provide a citation justifying this statement.

50. Section 5.1.1, Page 5-7 – The document states, “Throughout the Site, the underlying organic-rich marsh soils (commonly known as meadow mat) are expected to serve as a barrier to potential downward migration of dissolved VOCs, SVOCs, and mercury, because these substances will sorb to the organic material in this soil layer.” This ability to sorb and subsequently retard the vertical migration of contaminants will only last as long as there are receptor sites on the organic materials. Once these receptor sites are overwhelmed, breakthrough and subsequent movement of the plume occurs (Morrison and Boyd, 1977). This should be noted in the document.
51. Section 5.1.1, Page 5-8 – The document states, “Also, as mentioned above, the meadow mat beneath the fill is expected to significantly attenuate potential downward migration of SoPCs, especially SVOCs, VOCs, and mercury.” This statement should be qualified in accordance with comment 50 above.
52. Section 5.1.1, Page 5-8 – The document states, “Reducing conditions at the site may lead to conversion of sulfate to sulfide by sulfate-reducing bacteria.” This fact has yet to be proven and no substantiation has been given. Please revise or clarify.
53. Section 5.1.2, Page 5-11 – The domination of “tidal water movement” in the marsh area over surface runoff does not preclude the need to evaluate surface runoff as a potential migration pathway from the marsh area to other surface waters. Net movement of contaminants from the marsh to Berry’s Creek is likely when water levels are higher in the marsh. Marsh sediments contained mercury (to 1090 ppm) and other elevated concentrations of contaminants. Therefore, elimination of this pathway from further investigation is inappropriate and it should be added to the RI.
54. Section 5.1.3, Page 5-11 – The Department believes that fugitive dust may be an issue on-site. Although the developed portion of the site is paved, it is often flooded due to the back up of water at high tide from Berry’s Creek. The silt deposits left behind after the water recedes may contain high levels of mercury, which after drying could be suspended in the air as dust particles.
55. Section 5.1.4, Page 5-12 – It is stated that the “screening process compared dissolved concentrations of SoPCs in groundwater”. Since all ground water samples during Phase I were collected using low-flow sampling procedures without filtering, all contaminant concentrations are total concentrations rather than dissolved.
56. Section 5.2.2, Page 5-18 – The first paragraph states, “...concentrations in all ground water samples were below the ground water screening criterion...” The document should reference the Ground Water Quality Criteria.

57. Section 5.2.2, Page 5-18 – As noted above, total ground water contaminant levels must also be compared to surface water criteria since ground water migrates to and potentially impacts surface water.

58. Section 5.2.2, Page 5-18 – The interpretation of ground water flow at the site is questionable. MW-9, which is between the two warehouses, could be providing biased water level readings. The well is located only a minimal distance from the Wolf warehouse foundation and a large man-made drainage swale runs the length between the two buildings. Storm water runoff is diverted to this swale in an attempt to minimize flooding in the loading dock area of the warehouses. Any or all of these factors could be contributing to the observed shallow water level in the well.

59. Section 5.2.2, Page 5-18 – The former WRCC facility effluent discharge line (initially a ditch and later a pipe) and the discharge area should be discussed in Section 3.5 – Surface Water Hydrology and Section 5.0 – Transport and Fate of SoPCs. In addition, the former discharge ditch should be indicated on the figures.

60. Section 5.2.2, Page 5-18 – The document states that the “concentration of mercury in ground water at MW-7, therefore, is not likely to be related to leaching from the soil under the developed area.” Given the process history of the Wolf property as part of the process operations, it is possible that the soils beneath the warehouse are impacting the ground water. Therefore, the contribution of the Wolf property should be re-evaluated and this section revised accordingly.

61. Section 5.2.2, Page 5-21 – The conclusion that “groundwater with total mercury concentrations above the groundwater screening criteria is not migrating offsite” is inappropriate. As shown in Figure 3-3, the direction of ground water flow in the vicinity of the Wolf Warehouse and surface soil sample locations SS-04 and SS-05 is unknown and can only be inferred.

Until monitoring wells are installed and sampled in this area, conclusions regarding offsite migration should be removed.

62. Section 5.2.3, Page 5-23 – The text should discuss the potential basin contaminant contributions to the site and/or off-site areas. For example, was there a historic outlet for the basin and/or was the basin likely to overflow during heavy rain events?

63. Section 5.2.3, Page 5-24 – The finding of 11,100 ppm of mercury in the 0-2 cm sediment sample at station SD-02 is unusual since only 69.6 ppm of mercury was reported in the 0-15 cm sediment sample. A discussion of this result should be included in the narrative.

64. Section 5.2.3, Page 5-24 – Actual mercury values found in the marsh area should be included in the discussion of results provided here.

65. Section 5.2.3, Page 5-24 – The marsh soil/sediment was sampled in the 0-2' interval, and Berry's Creek sediment was sampled in the 0-6" (15 cm) interval. The mean marsh mercury level is higher than most creek sediment values. If mercury contamination in marsh sediment is higher near the surface, mercury levels may be biased low due to the deeper sample interval. Therefore, marsh sediment may represent a greater mercury (and other contaminants) source to the creek than inferred by the sample results. This issue should be investigated further.

66. Section 5.3.2, Page 5-31 – The document states that the Diamond Shamrock/Henkel ditch (north) may accumulate cadmium from off-site sources in the Berry's Creek basin. The text should better assess the potential sources to the ditch by describing site and off-site surface water flow to the ditch and the properties adjacent (linear extent, drainage, etc.) to the ditch.

67. Section 5.4.2, Page 5-35 – The document states that the pattern of PCB occurrence in sediment suggests that the site is not the source of PCBs in sediments of the adjacent water bodies. Please note that the PCBs found in the site soils and the sediments were both Aroclors 1248 and 1260. This correlation infers site input to sediments and further justification and/or investigation may be warranted.

68. Section 5.5, Page 5-37 – The VOC contamination found in test pit 13 should be evaluated and the possible relationship of this contamination to the SVOC and VOC contamination found in MW-2 should be discussed.

69. Section 5.5.1, Page 5-38- The finding of total xylenes at concentrations of 110,000 and 22,000 ppb in soil samples represent exceedances of the Impact to Ground Water Soil Cleanup Criteria and are, therefore, at levels of concern. The report must clearly note these exceedances here and elsewhere in the report where applicable.

70. Section 5.5.2, Page 5-38 – The statement that there are no VOC screening criteria for surface water or sediment is not true. Sediment screening criteria for several VOCs are included in the Department's "Guidance for Sediment Quality Evaluation" dated November 1998. For surface water screening values see MacDonald, et al. (1992). The report should be amended accordingly to reflect this fact.

71. Section 8.1.1, Page 8-1 – Bullet item 2 should reference the ground water quality criteria.

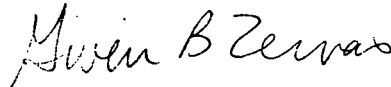
72. Section 8.1.2, Page 8-1- Please note that the findings are based on filtered seep and surface water samples.

73. Section 8.1.2, Page 8-2- Mercury was detected in sample locations downgradient of the developed area, including monitoring wells MW-5 and MW-7, seeps SE-04 and SE-06 (filtered), and surface water locations SW-02 and SW-03 (filtered). Please revise.

74. Section 8.2.2, Page 8-3- The document states "...migration rates in ground water of SoPCs into the marsh from the uplands are expected to be small." Currently the data generated do not substantiate this statement. Please justify the statement or revise accordingly.
75. Section 8.3.2, Page 8-5 - The report states that off-site sampling for mercury contamination along the northwest border of the site will use the Non-residential Soil Cleanup Criteria for delineation. This is inconsistent with N.J.A.C. 7:26E-4.1b, which specifies that off-site delineation must be to the Residential Soil Cleanup Criteria. The report must be amended accordingly.
76. Tables - All contaminant concentrations exceeding the applicable remediation standard shall be identified in accordance with N.J.A.C. 7:26E-4.8(c)3i(1).
77. Table 1-1 - The Residential Soil Cleanup Criteria must be included in this table.
78. Table B-5 - The ground water quality criteria must be included in this table.

Please feel free to contact me at (609) 633-7261 if you have any questions.

Sincerely,



Gwen B. Zervas, P.E.  
Case Manager  
Bureau of Federal Case Management

C: Matthew Fox, USEPA  
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